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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,715	09/12/2003	Shyue-Ming Jang	JANG3005/EM	1807
23364 7590 11/29/2007 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314				
EXAMINER				
MARTINEZ, BRITTANY M				
ART UNIT		PAPER NUMBER		
4116				
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11/29/2007		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/660,715

Applicant(s)

JANG ET AL.

Examiner

Brittany M. Martinez

Art Unit

4116

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
4a) Of the above claim(s) 10-22 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB-08)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Citation to the Specification will be in the following format (S. #,LL) where # denotes the page number and LL denotes the line number. Citation to U. S. Patent literature will be in the format (Inventor, #, LL) where # is the column number and LL is the line number. Foreign patent literature will be in the format (Inventor, P) where P denotes the paragraph number. Figures will be in the format (Inventor, Figure, reference number).

Status of Application

Applicant's election **without traverse** of Group I (**Claims 1-9**) in the reply filed on October 15, 2007 is acknowledged. Therefore, the restriction requirement is maintained, and made FINAL.

Claims 10-22 are withdrawn from further consideration pursuant to CFR 1.12(b) as being drawn to a nonelected invention. The elected claims (**Claims 1-9**) have been examined.

Priority

1. Applicant's claim for foreign priority in regard to Taiwan 092123728, filed August 28, 2003, is acknowledged. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Title

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: *Vertical Sublimation Apparatus*.

Specification

The wording of much of the specification is unclear and utilizes poor grammar. In general, it appears as if the application was not proofread. *Applicants are strongly encouraged to review the entire application for spelling and grammar errors.* Appropriate correction is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

Abstract

2. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Where applicable, the abstract should include the following:

- (1) if a machine or apparatus, its organization and operation;
- (2) if an article, its method of making;
- (3) if a chemical compound, its identity and use;
- (4) if a mixture, its ingredients;
- (5) if a process, the steps.

Extensive mechanical and design details of apparatus should not be given.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over Trueet (US 5,444,247) in view of Hecker (US 2,743,169).

With regard to **Claim 1**, Trueet discloses a vertical sublimation apparatus, comprising: a sublimation channel body (Trueet, Figure 4, 2); a heating evaporation device surrounding an evaporation pipe to control heating temperatures according to different materials for evaporating said materials (Trueet, Figure 4, 3); a condensation device surrounding the upper part of said sublimation channel body (Trueet, Figure 4,

3); and an incubating device for maintaining the temperatures of both the vapor channel and end products (Trueet, Figure 4, 3 and 6).

With regard to **Claim 3**, Trueet teaches an incubating device comprising a vapor channel incubating device and a product incubating device, said vapor channel incubating device surrounding an outlet port of said vapor channel (Trueet, Figure 4, 3).

With regard to **Claim 4**, Trueet teaches a product incubating device surrounding the lower part of the sublimation channel body (Trueet, Figure 4, 6).

With regard to **Claim 8**, Trueet teaches that the sublimer device can be made from quartz (Trueet, "Detailed Description" 14).

Trueet does not specifically teach a material rack comprised of a plurality of rails and fixed rings (**Claims 1 and 2**).

With regard to **Claims 1-2**, Hecker discloses a sublimation apparatus with an elongated heating container or boat for holding the charge to be sublimed (Hecker, 2, 22-24; Figure 1, 9); baffles (Hecker, 1, 38-39); and a condensation device surrounding the upper part of the sublimation channel body (Hecker, 1, 37-39; Figure 1, 11).

Thus, it would have been obvious to one of ordinary skill in the art to modify the apparatus taught by Trueet with the material rack taught by Hecker in order to obtain an apparatus suitable for producing highly pure products.

6. **Claims 5-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Trueet (US 5,444,247) in view of Hecker (US 2,743,169) as applied to **Claim 1** above, and further in view of Hogan (US 20020100710).

With regard to **Claim 1**, the proceeding rejection applies. Trueet does not specifically a product scratching device comprising a central support, fixed rings, and a sawtooth (**Claims 1 and 5-6**) or a product storage tank (**Claim 7**).

With regard to **Claims 5-7**, Hecker discloses a product scratching device with a central axis, fixed rings, and a moon-shaped hoe member (Hecker, 2, 25-30; Figure 1, 21, 22, and 27); and a product storage tank at the lower part of the sublimation channel body for collecting the condensed products falling therein after being scratched off by the scratching device (Hecker, Figure 1, 41).

With regard to **Claims 5-6**, Hogan discloses a plunger with an outer surface having sawteeth used to assist in removing solid buildup from a chamber (Hogan, 0021; Figure 9).

Thus, it would have been obvious to one of ordinary skill in the art to modify the apparatus taught by the prior art with the product scratching device and product storage tank taught by Hogan in order to obtain an apparatus suitable for producing highly pure products.

7. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over Trueet (US 5,444,247) in view of Hecker (US 2,743,169) as applied to **Claim 1** above, and further in view of Sandhu et al. (US 5,377,429).

With regard to **Claim 1**, the proceeding rejection applies. The prior art does not specifically teach sealing caps locked by O-rings (**Claim 9**).

With regard to **Claim 9**, Sandhu discloses a vertical sublimation apparatus with sealing caps located at each end of said channels having heat shield devices placed therein and locked by O-rings to prevent vacuum leakage (Sandhu, Figure 2, 46 and 48).

Thus, it would have been obvious to one of ordinary skill in the art to modify the apparatus taught by the prior art with the sealing caps taught by Sandhu in order to obtain an apparatus suitable for producing highly pure products.

Conclusion

1. No claim is allowed.
2. In general, prior art renders the claimed invention obvious.
3. Applicant is required to provide pinpoint citation to the specification (i.e. page and paragraph number) to support any amendments to the claims in all subsequent communication with the examiner. **No new matter will be allowed.**
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brittany M. Martinez whose telephone number is (571) 270-3586. The examiner can normally be reached Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 4116

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BMM

/Vickie Kim/

Supervisory Patent Examiner, Art Unit 4116